VRSEK, J., inz.; BENES, F., inz., CSc.; SZABO, A., inz.; STENO, J., inz.

Problems of continuous casting of low-carbon steels. Hut listy 18 no.11:773-779 N'63.

1. Vyzkumny ustav hutnictvi zeleza, Praha (for Vrsek and Benes)
2. Svermove zeleziarne, Podbrezova (for Szabo and Steno).

BENES, F., ins., CSc.; VRSEK, J., inz.; MAKARJEV, P., inz.; OLEJ, J., inz.

Quality characteristics and structure of low-carbon steels in continuous casting. Hut listy 18 no. 12:850-858 D '63.

1. Vyzkumny ustav hutnictvi zeleza, Praha (for all except Olej).
2. Svermove zeleziarne, Podbrezova (for Olej).

ACCESSION NR: AP4026363 Z/0055/64/014/003/0189/0195

AUTHOR: Beneš, F.; Soska, F.

TITLE: Influence of a magnetic field on a vibrating piezoelectric medium

SOURCE: Chekhoslovatskiy fizicheskiy zhurnal, v. 14, no. 3, 1964, 189-195

TOPIC TAGS: magnetic field, harmonic oscillator, dipole, piezoelectric crystal, dipole

ABSTRACT: The idea of influencing the frequency of a piezoelectric crystal by a stationary electric field for the purpose of standardization was first discussed by Vilbig (Lehrbuch der Hochfrequenztechnik II, Leipzig, 109, 1958). If an attempt is made to observe a vibrating piezoelectric medium as a system of dipoles (harmonic oscillators) during a qualitative description of this effect (and only in first approximation), it is found that an electric field polarizes this system and deflects the trajectory of the oscillator somewhat from the original direction but neither bends nor changes the directional force of the oscillator. However, since the resonance frequency of the oscillator changes (obviously due to the influence of the interaction between the dipoles of the system), the directional force k, and with it the frequency ω_0, must also change according to the equation

Card 1/2

ACCESSION NR: AP4026363

$$\omega_0^2 = \frac{k}{m}$$

The influence of a magnetic field on a system of harmonic oscillators is manifested in another way. Its influence causes not only another type of interaction between the oscillators (and thus a possible change in the material constants) but also a change in the frequency of an oscillator which has been produced by the curvature of its trajectory. The author studies the influence of a magnetic field on the frequency of piezoelectric crystals in the above sense. Orig. art. has: 3 figures and 20 equations.

ASSOCIATION: Department of Physics, Technical University, Liberec

SUBMITTED: 10Jun63 DATE ACQ: 15Apr64 ENCL: 00

SUB CODE: MM NO REF SOV: 001 OTHER: 005

Card 2/2

BENES, Ivan

Shostakovskii's balsam -- a new wide-spectrum drug. Cas.lek. cesk. 99 no.1:25-27 3 Ja '60.

1. Statni ustav pro kontrolu leciv, Praha, reditel ins. Jan Burianek.
(POLYVINYLS pharmacol.)
(ANTISEPTICS pharmacol.)

BENES, I.; BURIANEK, J.; CIFKA, J.

Determination of vitamin B12 with the aid of radioactive carbon C-14. Cesk. farm. 11 no.6:281-286 Jl '62.

1. Statni ustav pro kontrolu leciv, Praha Ustav jaderneho vyzkumu CSAV.

(CARBON radioactive) (VITAMIN B12 chem)

BENES, J.

Application of the theory of random processes in geology. p. 461.

SLABOPROUDY OBZOR. (Ministerstvo vseobecneho strojirenstvi, Ministerstvo, spoju a Ceskoslovenska vedecko-technicka spolecnost, sekce elektrotechnika) Praha, Czechoslovakia, Vol. 20, No. 7, July 1959.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 11, November, 1959.

Uncl.

BENES, J.

"June, Water Purity Month."

p. 241 (Nova Technika, No. 6, 1958, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 9, September 1958.

BENES, JIRI

CZECHOSLOVAKIA/Radio Physics - Application of Radiophysical Methods I-10

Abs Jour : Ref Zhur - Fizika, No 5, 1958, No 11452

Author : Bednarik Josef, Benes Jiri
Inst : Not Given
Title : Color Television

Orig Pub : Slaboproudy obzor, 1957, 18, No 7, 495-508

Abstract : Brief examination of the requirement of a system of color television. Description of NTSC and TSC systems are given. Properties of both systems are examined from the point of view of further development.

Card : 1/1

PROCESSES AND PROPERTIES INDEX

SA

B 66
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621.396.615.17

4168. A pulse generator. S. SATRAVA AND J. BENEŠ. *Slaboproudý Obzor*, 12, 15-20 (Jan., 1951) In Czech.

In the pulse generator described the output pulses are both positive and negative and the pulse shape is approximately rectangular. The pulse magnitude may be varied continuously from 0 to 45 V and the pulse length from 0.55 to 1.15 μsec. Single pulses may be triggered by means of a push-button while trigger pulses with frequencies 1, 5, 10, 20 and 50 c/s are supplied by a built-in relaxation oscillator. Trigger pulses with frequency of 50 c/s are obtained from the power line. An external source of alternating voltage may trigger the pulse generator in the frequency range from 5 to 200,000 c/s. V.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

BENES, J.

"Development of the Mechanized Production Process in Czechoslovakia." p. 476 (ZA SOCIALISTICKOU VEDU A TECHNIKU, Vol. 3, No. 11, Nov. 1953) Praha, Czechoslovakia

SO: Monthly List of East European Accessions, Library of Congress, Vol. 3, No. 4, April 1954. Unclassified.

BENES, J.

For a systematic development of automatizati n. p. 505.

SLABORPROUDY OBZOR. PRAHA. vol. 14, no. 12, Dec. 1953.

SOURCE: East European Accessions List (EEAL), LC, Vol. 5, no. 3, March 1956 .

BENES, J.

Fighting bureaucracy in preparing the Plan of Technical and Organizational Operations. p. 469. (STROJIRENSKA VYROBA, Vol. 4, No. 11, Nov 1956, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 12, Dec 1957. Uncl.

PENESH, Yu. (Praga).

Some problems in the development of automatization in Czechoslovakia. Avtom.i telem. 17 no.11:923-57 N '56. (MLRA 9:12)
(Czechoslovakia--Automation) (Automatic control)

BENES, J.

Basic principles and problems of color television. p.302.
(Technicka Praca, Vol. 9, No. 5, May 1957, Bratislava, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 9, Sept. 1957. Uncl.

BENES, J.

Technical-information service in the Netherlands. Tr. from the Czech. p. 10. (Ujitok Lapja, Vol. 9, No. 7, May 1957, Budapest, Hungary)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 8, Aug 1957. Uncl.

BENES, J.

"Substance of the correlation method of determining the operation of linear regulated systems with changing parameters." P. 396.

SLABOPROUDY OBZOR. (Ministerstvo presneho strojirenstvi, Ministerstvo spoju a Vedecka technicka spolecnost pro elektrotechniku pri CSAV). Praha, Czechoslovakia, Vol. 20, No. 6, June 1959.

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 8, August 1959.
Uncla.

ZEMAN, K.; BENES, J.

Autoradiography of β-hemolytic streptococci with labelled P32.
Cesk. epidem. 12 no.1:31-36 Ja '63.

1. Ustav epidemiologie a mikrobiologie v Praze — Radiologicka dozimetrie UJV CSAV.
(RADIOAUTOGRAPHY) (PHOSPHORUS ISOTOPES) (STREPTOCOCCUS)
(SULFUR ISOTOPES)

CZECHOSLOVAKIA
25 Sep 63

BENES, J.

Prof, Dr, Canon, bade farewell to the delegation of Czechoslovak churchmen departing for the Vatikan Council, 25 September.

Lidova Demokracie, Prague, 26 Sep 63, p 1.

(1)

16.6200 (1031, 1329)
13,2941

32586
S/569/61/003/000/004/011
D201/D305

AUTHORS: Nékolny, J., Professor, Doctor of Technical Sciences, Engineer, and Benes, J., Doctor of Technical Sciences, Candidate of Technical Sciences, Engineer

TITLE: Joint stability and regulation quality control and its application in statistical dynamics

SOURCE: International Federation of Automatic Control. 1st Congress, Moscow, 1960. Statisticheskiye metody issledovaniya. Teoriya struktur, modelirovaniye, terminologiya, obrazovaniye. Moscow, Izd-vo AN SSSR, 1961, 106 - 124

TEXT: The authors show the possibility of supplementing the Routh-Shura reduction [Abstractor's note: Shura is a transliteration.] of the denominator of the transfer function by an analogous reduction of the numerator of the transfer function and of using the coefficients thus obtained for simple evaluation of the magnitude quadrature area of the impulse function and of the quadrature area of reaction to the unit step without determining by calculations the

values of high order determinants. To do so two methods of reducing the numerator were developed and the possibilities of their use for minimizing the quadrature areas were investigated. The method suggested may also be applied to evaluate the r.m.s. error of the control circuit acted upon by a random staticnary process. A method of approximate evaluation of the rms. error is suggested, for which the Laguerre coefficients are used, as determined for each case of realization of a random process by means of an orthogonal analyzer using the Laguerre modulators. This method is stated to have been successfully applied at the Institute of Information and Automation theory of the Czechoslovak Academy of Sciences for solving on the digital computer "Ural" the average value $M(\alpha_3)$ and the approximation to standard deviation $\sigma_A(\alpha_3)$ of the input magnitude of a non-linear component of the follow-up system in Fig. 1, for separate segments of realization of $\alpha_1(t)$ of the random input process of the follow-up system. The output of the non-linear element was $\alpha_4 = L$ sign α_3 and the transfer function

Joint stability and regulation ...

$$K_1G_1(p) = \frac{5}{1 + 0.1p} \text{ and } K_2G_2(p) = \frac{2}{1 + 0.2p} .$$

A method of fast automatic computation by a two-channel iterative process was also devised. A discussion followed in which I.Ye. Kasakoc took part. There are 2 figures and 5 references: 3 Soviet-bloc and 2 non-Soviet-bloc. The references to the English-language publications read as follows: N. Wiener, Extrapolation, interpolation and smoothing of stationary time series, New York, The Technology Press of the M.I.T. and John Wiley a. S., 1949; R.C. Botton, Jr. The analysis of non-linear control systems with random inputs, Proc. of the symposium of non-linear circuit analysis. New York, Polytechnic Institute of Brooklyn, 1953, p. 369 - 391.

ASSOCIATION: Higher School of Transport Machine Construction, Prague (J. Nékolny); Institute of Information and Automation Theory, Prague (J. Beneš)

Card 3/4

HENES, J.

Correct breakdown by tractor brigade of the state plan for operation of tractors. p. 458.

MECHANISACE ZEMEDELSTVI. Praha. Vol. 4, no. 24, Dec. 1954.

SOURCE: East European Accessions List (EEAL), LC, Vol. 5, no. 3, March 1956

BENES, J.

Calculating requirements of machinery and tractor equipment for 1955. p. 9
MECHANISACE ZEMEDELSTVI. Vol. 5, No. 1, Jan. 1955

SO: Monthly East European Accession, (EEAL), LC, Vol. 4, No. 9, Sept. 1955 Uncl.

BENES, J.

Research problems in the construction of a machine for harvesting hops. p. 165.
SBORNIK RADA MECHANISACE A ELEKTRIFIKACE SEMEDELSTVI A LESNICTVI
Vol 28, no. 2/3, Sept. 1955
Czechoslovakia

SOURCE: EEAL, Vol, 5, no. 7, July 1956

BENES, J.

Location of sites for storing timber in a forest. p. 151.
SBORNIK, RADA C: SPISY FAKULTY LESNICKE, Brno, No. 3, 1955.

Source: Monthly List of East European Accessions, (EEAL), LC, Vol. 5, No. 6 June 1956, Uncl.

BE[illegible], J.; [illegible], K.

Standardization of technological processes in piece and small-series production. p. 230. STROJIRENSTVI. (Ministerstvo strojirenstvi) Praha. Vol. 4, no. 6, June 1956.

SOURCE: East European Accessions List, Vol. 5, no. 9, September 1956

BÍNA, J.

Relationship between lumber transportation and forest-road building. p. 299.

SBORNIK. LESNICTVI. (Ceskoslovenska akademie zemedelskych ved.) Praha, Czechoslovakia, Vol. 4, no. 5, May 1958.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, no. 11, Nov. 1959 Uncl.

BENES, J.

Mechanism of the chloramine-B reaction with bis (2-chloroethyl) sulfide. Coll Cz Chem 28 no. 5: 1171-1176 My '63.

1. Militarakademie "A. Zapotocky", Brno.

BENES, J.

Action mechanism of antioxidants in the oxidation of polypropylene. Coll Cz Chem 29 no.2:363-373 F '64.

1. Research Institute of Macromolecular Chemistry, Brno.

ALLERGOLOGY

CZECHOSLOVAKIA UDC 616.28-008.55-039.31-02--97.2(613.262)

BENES, J.; PREROVSKY, K.; REHUREK, L.; KASE, F.; Internal Department Krajska Hospital (Interni Odd. Krajske Nemocnice), Usti nad Labem, Head (Vedouci) Dr O. DUB; Otolarygological Dept. Krajska Hospital (Otolaryngologicke Odd. Krajske Nemocnice) Usti nad Labem, Head (Vedouci) Dr K. ZEMAN; Krajska Transfusion Station (Transfuzni Stanice), Usti nad Labem, Head (Vedouci) Dr J. MATOUSEK.

"Food Allergy to Garlic and Signs of Meniere's Disease."

Prague, Casopis Lekaru Ceskych, Vol 105, No 31, 9 Aug 66, pp 825 - 827

Abstract [Authors' English summary modifed]: A case of Meniere's disease is described; the classical manifestation of this disease is food allergy to garlic. The allergic basis was confirmed by the leukopenic, thrombopenic, and repeated exposure test. 2 Figures, 5 Western, 2 Czech references. (Manuscript received Jan 66).

1/1

BENES, J.

CZECHOSLOVAKIA / Inorganic Chemistry. Complex Compounds. C

Abs Jour: Ref Zhur-Khimiya, No 19, 1958, 63995

Author : Koutnik Vilem, Benes Jan
Inst : Not given
Title : The Extraction of P_2S_5

Orig Pub: Chem. prumysl, 1958, 8, No 2, 81-82

Abstract: A simple method was worked out for the extraction of P_2S_5 of sufficient purity with a common laboratory installation, and the most favorable conditions of the reaction were established. The maximum output in the case of the application of pure a-chloronaphthalene under optimum conditions consisted of 65% (in conversion to white P).

Card 1/1

CZECHOSLOVAKIA / Inorganic Chemistry. Complex Compounds. C

Abs Jour: Ref Zhur-Khimiya, No 8, 1959, 26700.

Author : Koutnik, V. and Benes, J.
Inst : Not given.
Title : The Bromination of Aluminum.

Orig Pub: Chem Prumysl, 8, No 4, 187-188 (1958) (in Czech with English and Russian summaries).

Abstract: The authors note that earlier methods for the preparation of $AlBr_3$ frequently give a product of insufficient purity and very low yields. The proposed method for the synthesis of $AlBr_3$, in the opinion of the authors, is devoid of these drawbacks. A small amount of $AlBr_3$ is placed in a flask and covered with Al shavings, the flask is flushed out with nitrogen, and the contents are

Card 1/2

BENES Jan

27

5

Conditions for the preparation of sodium hypophosphite.

Zdeněk Uhlíř, Stanislav Scholle, and Jan Beneš (Vysoká škola chem. technol., Pardubice, Czech.). *Chem. průmysl* 8, 291–6(1958).—White P and milk of lime reacted under N. The escaping phosphines were burned in air and the P_2O_5 absorbed in water. By using a 70–100% Ca excess and an excess of 10 ml. water/g. P over the stoichiometric ratio $3P_4:3Ca(OH)_2:3H_2O$, the reaction time was 13 and 6 hrs. at 60° and 90°. The yield is highest at 90% excess $Ca(OH)_2$, at temp. of 75°, and the amt. of water specified above. Agitation doubles the reaction rate and improves the yield (up to about 40% conversion of P to hypophosphite). The concn. of hypophosphite soln. should be carried out at reduced pressure below 70° to avoid product decomposition.

Herbert Morawetz

[illegible]	: Czechoslovakia	H-8
[illegible]	:	
[illegible]	:	46384
[illegible]	: Heyes, J.; Sticha, J.	
[illegible]	:	
Title	: Isolation of Vanadium Pentoxide from Alkaline Solutions	
[illegible]	: Chem. prumysl, 1954, 8, No 7, 350-352	

[illegible] : Alkaline solutions obtained on processing of V-raw materials can be subjected to hydrolysis in acid medium, to V-acid, only in the absence of large amounts of Al_2O_3, Fe_2O_3, or Na_2CrO_4. The presence of sulfates of alkali metals, even at high concentrations, does not hinder the hydrolysis. Alkaline solutions can be processed directly to NH_4VO_3 (I) by an addition of technical NH_4Cl. Impurities do not interfere with precipitation of I, but increase expenditure of NH_4Cl. Pure I is obtained by two reprecipitations. Decomposition of I is conducted at 220° without appreciable reduction of V^{5+}. Purity of product obtained by decomposition

Card 1/2

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: of I, reaches 99.9% (on the basis of V_2O_5-content) and exceeds the purity of the product obtained by hydrolysis. Bibliography 8 references. -- I. Velikex.

: 2/2

CZECHOSLOVAKIA / Physical Chemistry. Thermodynamics. B
Thermochemistry. Equilibria. Phase
Changes. Physico-chemical Analysis.

Abs Jour : Ref Zhur - Khimiya, No 12, 1959, No. 41595

Author : Scholle, Stanislav; Uhlir, Zdenek; Benes, Jan.

Inst : ~~Not~~ given

Title : Solubility Curve of a NaI-NaBr-H_2O System

Orig Pub : Chem. listy, 1958, 52, No 6, 1191-1192

Abstract : By a "wet residue" (Schreinemacher's) method, the solubility in a NaI-NaBr-H_2O system at 25° was studied. The solubility curve was constructed on the basis of tabulated data. The region of saturated solutions in equilibrium with the solid solutions of Na (I, Br)·2 H_2O was found. -- V. Ruzicka

Card 1/1

COUNTRY	:	CZECHOSLOVAKIA B
CATEGORY	:	Physical Chemistry. Thermodynamics. Thermochemistry. Equilibria. Phase Transitions.*
ABS. JOUR.	:	RZKhim., No. 1 1960, No.452
AUTHOR	:	Scholle, S.; Uhlir, Z.; Benes, J.
INST.	:	-
TITLE	:	Solubility Curve in the System NaI-NaBr-H_2O
ORIG. PUB.	:	Collect. Czechosl. Chem. Communs, 1959, 24, No 3, 987-988
ABSTRACT	:	No abstract See RZhKhim., No 12, 1959, No 41595.

*Physicochemical Analysis

CARD: 1/1

Distr: 4E2c(n)

Increasing the electron sensitivity of the nuclear emulsion. J. Beneš and J. Kubal (Czechoslov. Acad. Sci., Prague). *Phot. Korr.* 96, 1[illegible]-7(1960); cf. *CA* 53, 15802a. --The sensitivity of nuclear emulsions to light and to β-radiation from C^{14} was increased by addn. to the emulsion of 2-[p-dimethylaminostyryl]benzothiazole (I). Over a range of concns. of I, the log sensitivity to electrons increased linearly with the log concn. The increase in sensitivity is proportional to the amt. of I adsorbed by the Ag halide. The sensitizing action of I depends on the dispersity of the Ag halide, the AgI content, and the pBr of the emulsion. It is not influenced by the Cd content of the emulsion for AgBr emulsion types, nor by the time of chem. ripening. The sensitivity of the I-sensitized emulsions decreased with increasing time of keeping between their prepn. and exposure, whereas the sensitivity of the unsensitized emulsions did not change. The mechanism of sensitization is discussed. T. H. James

CZECHOSLOVAKIA

BENES, J.

Military Academy "A. Zapotocky," Brno

Prague, Collection of Czechoslovak Chemical Communications, No 5, 1963, pp 1171-1175

"Towards the Mechanism of the Reaction of Chloramine B with Bis(2-Chloroethyl)sulfide."

BENES,J.; LINTNER,L.

Possibilities of chemical dosimetry in clinical practice.
1. Estimation of relative deep doses. Cesk. rentgen. 18 no.2:
126-132 Mr.'64.

1. Onkologicke oddeleni fakultni nemocnice v Praze 10.

SZILAGYI, Andras; BENES, Janos; BALOGH, Jozsef

Forum of trade unionists. Munka 8 no.12:12 D '58.

1. Wilhelm Pieck Vagon- es Gepgyar szakszervezeti bizottsaga elnoke (for Szilagyi). 2. Ipari Robbanoagyaggyar szakszervezeti bizottsagi elnoke (for Benes). 3. Allami Mezogazdasagi Gepallomas szakszervezeti bizottsagi elnoke, Cegled (for Balogh).

BENES, J., CHODOUNSKY, Z.; PACLTOVA, M.

Possibilities of using solutions of barium chloride and zinc chloride instead of lead glass. Cesk. rentgen. 18 no.1:59-61 Ja '64.

1. Onkologicke oddeleni fakultni nemocnice v Praze 10; zast. vedouciho: MUDr. L. Lintner.

*

Radiology

CZECHOSLOVAKIA

ZICHA, B.; BENES, J.; Veterinary Research Center (Veterinarni Vyzkumne Stredisko), Prague - Hotol

"Damage Caused to Pyridine Nucleotides in an Irradiated Organism."

Prague, Veterinarni Medicina, Vol 13, No 2, Feb 67, pp 107-118

Abstract [Authors' English summary modified]: Changes caused by an irradiation dose of 42,000 r to NAD(nicotinamide adenine dinucleotide) and to NADH2 (dihydronicotinamide adenine dinucleotide) were investigated in vitro. Fluorescence maximum of NAD decreases in anaerobic conditions, in aerobic conditions there is little change. The amount of pyridine nucleotides in rat liver decreases after a whole body dose of 1400 r. The irradiated liver maintains its normal reduction capacity within 15% for 3 hours after exposure. The total level of pyridine nucleotides in isolated mitochondria of rat liver also decreases after an irradiation dose of 1400 r. However, the mitochondria maintain their ability to transfer H-proton. 8 Figures, 5 Tables, 31 Western, 2 Czech, 1 Japanese references. (Manuscript received 3 May 65).

1/1

[illegible], Jan

Indexes for long-term planning in the building industry.
Inz stavby 12 no.11:466-469 '64.

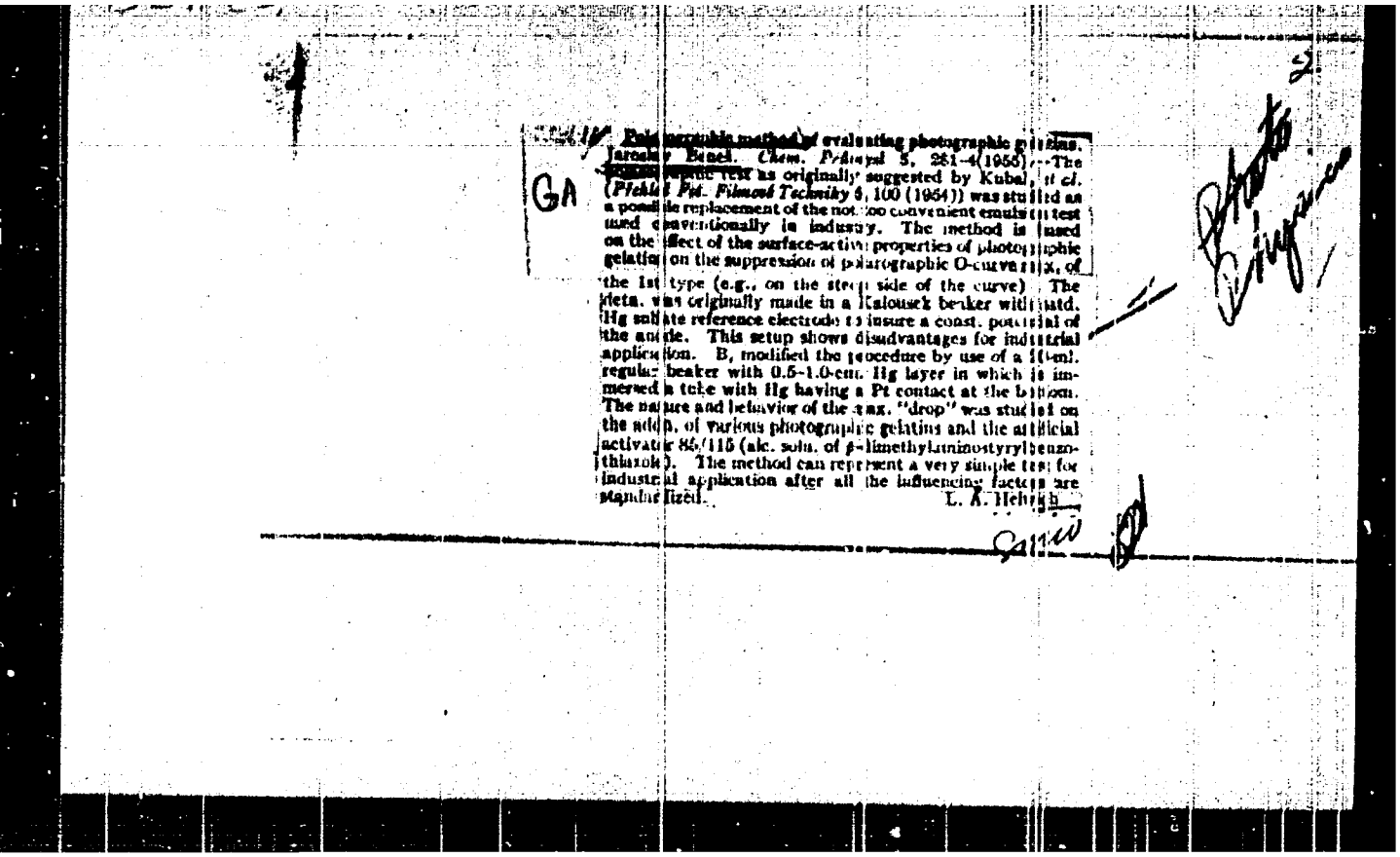
1. Armabeton, Prague.

Benes, J.

Polarographic study on the reduction of molybdate ions in a solution of sulfuric acid in the presence of hydrogen peroxide. p. 227. CHEMICKE ZVESTI Vol. 9 no. 5 May 55

Vol. 9, no. 5, May 1955.

SO: Monthly List of East European Accession, (EEAL), LC, Vol. 4, No. 9, Sept. 1955, Uncl.



Polarographic method of evaluating photographic gelatins. Jaroslav Bunel. *Chem. Průmysl* 5, 281–4(1955).—The polarographic test as originally suggested by Kubal, *et al.* (*Přehled Fot. Filmová Technika* 9, 100 (1954)) was studied as a possible replacement of the not too convenient emulsion test used conventionally in industry. The method is based on the effect of the surface-active properties of photographic gelatin on the suppression of polarographic O-curve max. of the 1st type (e.g., on the steep side of the curve). The gelatin was originally made in a Kalousek beaker with satd. Hg sulfate reference electrode to insure a const. potential of the anode. This setup shows disadvantages for industrial application. B. modified the procedure by use of a 100-ml. regular beaker with 0.5–1.0-cm. Hg layer in which is immersed a tube with Hg having a Pt contact at the bottom. The nature and behavior of the max. "drop" was studied on the addn. of various photographic gelatins and the artificial activator 86/115 (alc. soln. of β-dimethylaminostyrylbenzothiazole). The method can represent a very simple test for industrial application after all the influencing factors are standardized.

L. K. Herrick

Benes, J.

Contribution to the polarography of molybdenum. p. 283

Vol. 9, no. 5, May 1955.
CHEMICKE ZVESTI

SO: Monthly List of East European Accession, (EEAL), LC, Vol. 4, No. 9, Sept. 1955, Uncl.

Sensitizing effect of photographic gelatin and its measurement. Josef Kubal, Karel Vacek, and Jaroslav Beneš (Karlovy Univ., Prague). Chem. Listy 49, 90[illegible](1955).—On the basis of some phys.-chem. properties of gelatin, a method is suggested for qual. evaluation of the photochemically active substances contained in the gelatin. E. E.

3

BENES, J.

Category: Czechoslovakia/Fitting Out of Laboratories. Instruments, Their Theory, Construction and Use. E.

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 31192

Author : Benes Jaroslav
Inst : not given
Title : Photocolorimeters of Czechoslovak Manufacture

Orig Pub: Chem. prumysl., 1956, 6, No 7, 292

Abstract: It was found that results of analytical determinations carried out by using a photocolorimeter of Czechoslovak manufacture (RZhKhim, 1956, 65423; 1957, 1351) are practically identical with those secured by means of a Khiran [transliterated] photocolorimeter. A defect of the former is the non-linear shape of calibration curves, which complicates calibration.

Card : 1/1

BENES, J

Category: Czechoslovakia/Analytical Chemistry - Analysis of inorganic G-2 substances.

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 31003

Author : Benes Jaroslav
Inst : ~~not given~~
Title : Effect of Chlorides on Determination of Iron in Gelatin

Orig Pub: Chem. zvesti, 1956, 10, No 8, 525-527

Abstract: On investigation of 66 varieties of gelatin it was found that no correlation exists between the content of Cl^- and Fe. Cl^- was determined in gelatin hydrolyzate by potentiometric titration with $AgNO_3$, and the Fe -- colorimetrically, with NH_4SCN, in the ash obtained on combustion of the sample. To prevent volatilization of Fe in the presence of Cl^-, the gelatin should be treated, prior to combustion, with concentrated HNO_3 (about 1 ml/g).

Vysoka Skola Chem. Tech., Pardubice, Czech.

Card : 1/1 -18-

BENES, J.

Structural viscosity of gelatine solutions.

P. 271. (Chemicky Prumysl.) (Praha, Czechoslavakia) Vol 7, No. 5, May 1957

SO: Monthly Index of East European Accession (EEAI) LC. Vol. 7, No. 5, May 1958

YAROSLAV, BENES

USSR / Physical Chemistry; General Problems. Colloidal Chemistry. B-14
Dispersion Systems.

Abs Jour : Ref Zhur - Khimii, No 1, 1958, No 649

Author : Benes Yaroslav

Inst : Not Given

Title : Changes in Viscosity of Gelatin Solutions with Time

Orig Pub : Chem. prumysl, 1957, 7, No 6, 329-330 (Czech.)

Abstract : A study of viscosity (η) changes of gelatin solutions was conducted at 37° within a period of one day. It was established that η and its rate of decrease fo not depend upon time. In the author's opinion, the decrease of η is produced by a number of reasons; most of them are not as yet established.

Card : 1/1

BENES, Jaroslav

CZECHOSLOVAKIA/Physical Chemistry - Colloid Chemistry, Dispersion Systems B-14

Abs Jour: Referat. Zhurnal Khimiya, No 2, 1958, 4046.

Author : Jaroslav Benes.
Inst :
Title : Influence ofConcentration on Viscosity of Gelatin Solutions.

Orig Pub: Chem. prumysl, 1957, 7, No 7, 385-386.

Abstract: The influence of the concentration c on the viscosity η of gelatin solutions in the range of c from 2 to 10% at 35 and 45° and under the pressure of 10 to 160 g per sq. cm was studied. The empiric equation $\eta = A \exp kc$, where A and k are constants, was found.

Card : 1/1 -9-

BENES, J.

CZECHOSLOVAKIA/Physical Chemistry - Kinetics. Combustion. Explosions. Topochemistry. Catalysis. B-9

Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 24216

Author : Benes, J., Weidenthaler, P.
Inst :
Title : Mechanism of Reaction of Dichlorodiethyl Sulfide with Sodium Thiosulfate.

Orig Pub : Chem. zvesti, 1957, 11, No 6, 324-329

Abstract : Study of the effects of dielectric constant and ionic force on velocity of the reaction of dichlorodiethyl sulfide (I) with $Na_2S_2O_3$. Change in the velocity of this reaction on change of dielectric constant and ionic force, shows that the stage which determines the velocity of the process is the dissociation of I.

Card 1/1

BENES, J.

TECHNOLOGY

Periodical CHEMICKY PRUMYSL. Vol. 8, no12, Feb. 1958

KOUTNIK, V. ; BENES,J. Preparation of phosphorus pentasulfide. p. 81

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no, 3, March, 1959, Uncl.

BENES, J.

CZECHOSLOVAKIA / Analytical Chemistry. Analysis of Inorganic Substances. E

Abs Jour: Ref Zhur-Khimiya, 1958, No 20, 67293.

Author : Benes J. V.
Inst : Not given.
Title : Photometric Determination of Iron in Gelatin with the Use of 2, 2'-Dipyridil.

Orig Pub: Chem. prumysl, 1958, 8, No 2, 84-85.

Abstract: A 2gr. dried sample is carefully heated in a ceramic crucible until gases cease to evolve, the residue is mixed with concentrated HNO_3 (1cc HNO_3/ / 1gr. of sample), heated to remove HNO_3, calcined at 450°, followed by the addition of 2cc of concentrated HNO_3, evaporation to dryness, and the solution of the remainder in 50cc of 0.25 normal HCl. 5cc of 10% solution of $NH_2OH.H_2SO_4$, 2M CH_3COONa

Card 1/3

CZECHOSLOVAKIA / Analytical Chemistry. Analysis of In- E
organic Substances.

Abs Jour: Ref Zhur-Khimiya, 1958, No 20, 67293.

Abstract: is then added to the 25cc of the obtained solution until pH becomes approximately 4, followed by the addition of 3cc of the 2, 2'-dipyridil 0.1% solution. After 30 minutes standing the sample is subjected to photometric test. The curve is calibrated against a solution of Mohr salt, containing 0.01 mgr. in 1cc of 0.25 normal HCl. Addition of HNO_3 during the precipitation step ($\geq$1cc of concentrated HNO_3/1gr. of sample) is necessary in order to eliminate losses arising from the presence of Cl^- in gelatin. The described method made it possible to detect low con-

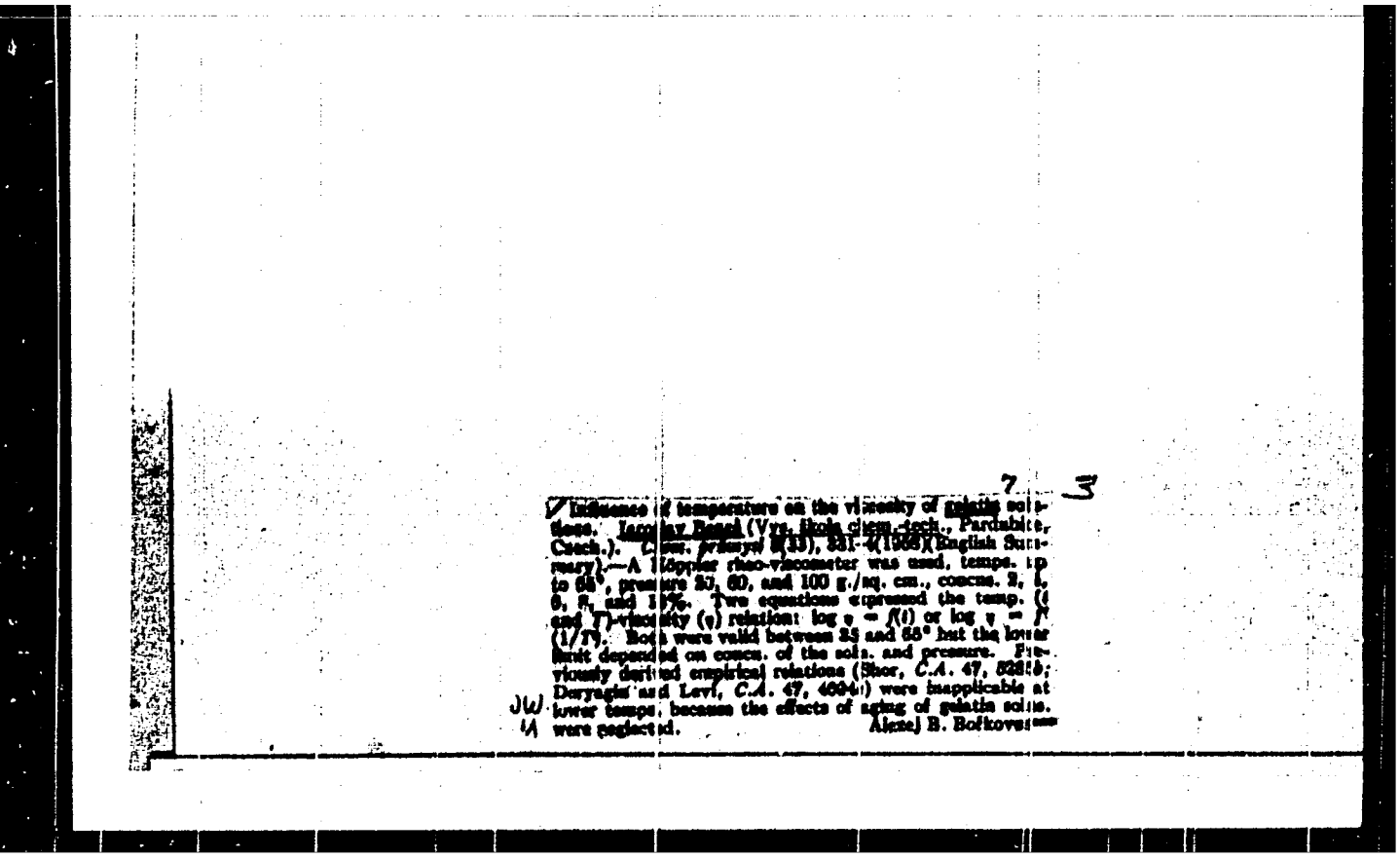
Card 2/3

CZECHOSLOVAKIA / Analytical Chemistry. Analysis of In- E
organic Substances.

Abs Jour: Ref Zhur-Khimiya, 1958, No 20, 67293.

Abstract: centrations of Fe in different types of photo-
emulsions (0.0024-0.0069%) and in food gelatines
(approx. 0.0070% Fe).

Card 3/3



Influence of temperature on the viscosity of gelatin solutions. Jaroslav Beneš (Výz. škola chem.-tech., Pardubice, Czech.). *Chem. průmysl* 8(13), 331-4(1958)(English Summary).—A Höppler rheo-viscometer was used, temps. up to 65°, pressure 50, 60, and 100 g./sq. cm., concns. 3, 4, 5, 6, 8, and 10%. Two equations expressed the temp. (*t*) and *T*)-viscosity (η) relation: log η = *f*(*t*) or log η = *f* (1/*T*). Both were valid between 35 and 65° but the lower limit depended on concn. of the sols. and pressure. Previously derived empirical relations (Shor, *C.A.* 47, 8281*b*; Daryagin and Levi, *C.A.* 47, 4994*i*) were inapplicable at lower temps. because the effects of aging of gelatin sols. were neglected. Alexej B. Bolkover

CZECHOSLOVAKIA/Nuclear Physics - Installations and Instruments. C
Methods of Measurement and Research

Abs Jour : Ref Zhur Fizika, No 10, 1959, 21961

Author : Kubal, Josef; Benes, Jaroslav; Hrkal, Zbynek

Inst : Institute of Nuclear Physics, Czechoslovak Academy of Sciences, Prague, Czechoslovakia

Title : A Nuclear Emulsion was Prepared by the Ordinary Method with a Weight Ratio of Silver Bromide in the Gelatine Equal to 6.4.

Orig Pub : Ceskosl. casop. fys., 1958, 8, No 5, 608-613

Abstract : The Cd^{2} ions were introduced in the form of $CdPr_2$. The chemical sensitizer used were diphenyl amine 2p-diphenyl amine styryl benzo thiazol. Plates with emulsion layer thicknesses of 35 and 70 microns were bombarded with alpha particles from Pe^{210}, electrons, and visible light.

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procedure of the development of the plates, the determination of the sensitivity, and the investigation of the particle tracks was standard. Experiment has shown that an increase in the contents of the Cd ions in the emulsion decreases the dimensions of the grains, increases their homogeneity and densitivity. The magnitude of the grains was not measured directly and the influence of the Cd ions on the structure of the emulsion was determined from a change in the coefficient of contrast. The contrast coefficient, even with the $CdBr_2$ content of one molar percent, was increased considerably and then remained constant. In the author's opinion, this indicated that an iso-dispersed phase has been reached. The sensitivity of the emulsion increased with the increasing concentration of cadmium ions. Thus, in irradiation with electrons from the decay of C^{14}, the sensitivity was

CZECHOSLOVAKIA/Nuclear Physics - Installations and Instruments. Methods of Measurement and Research C

Abs Jour : Ref Zhur Fizika, No 10, 1959, 21961

increased by 8% as the cadmium ion concentration was increased to 5 molar percent. Some of the prepared emulsions were found to be sensitive to low-energy electrons.
-- P.P. Sosenko

Card 3/3

Country : Czechoslovakia H-8

Category :

Abs. Jour. : [illegible]

Author : Uhlíř, Z.; Scholle, S.; Beneš, J.

Institut. :

Title : The Conditions of Preparation of Sodium Hypophosphite

Orig. Pub. : Chem. prumysl, 1958, 8, No 6, 291-296

Abstract : The conditions have been determined for the preparation of $Ca(H_2PO_2)_2$ (I) and for its conversion to NaH_2PO_2 (II). I is obtained from yellow phosphorus and an aqueous suspension of $Ca(OH)_2$ according to the equation $2P_4 + 3Ca(OH)_2 + 6H_2O \rightarrow 2PH_3 + 3Ca(H_2PO_2)_2$. The reaction is carried out at 75° with vigorous stirring, $Ca(OH)_2$ is used in a 10% excess over the stoichiometric, water is added in a 10-fold amount of the weight of P. Duration of the reaction 6 hours. The resulting I is filtered off. Yield of I is [illegible] on the basis of P. Conversion of I to II is effected in accordance with the equation $Ca(H_2PO_2)_2 + Na_2CO_3 = 2NaH_2PO_2 + CaCO_3$. To crystallize II the solution is evaporated in [illegible]

Card 1/2

: Czechoslovakia

B-2

: Vacuum at 40° and pH ≅ 6.5. The waste sludge, after removal of excess $Ca(OH)_2$ and oxidation of phosphorus to P^{5+}, is used as raw material for fertilizers. Bibliography: 30 references. -- I. Yelinek.

2/2

CZECHOSLOVAKIA/Nuclear Physics - Installations and Instruments. C
Methods of Measurement and Research.

Abs Jour : Ref Zhur Fizika, No 12, 1959, 26714

Author : Kubal, Josef; Benes, Jaroslav; Hrkal, Zbynek

Inst : Institute of Nuclear Physics, Czechoslovak Academy, of Sciences, Physics Institute Charles University Prague, Czechoslovakia

Title : Effect of Cadmium Ions on the Properties of Nuclear Emulsions

Orig Pub : Chekhosl. fiz. zh., 1958, 8, No 6, 658-664

Abstract : To obtain fine grain emulsions, a study was made of the slowing down and sensitizing action of ions of cadmium in the preportion of nuclear emulsions. Their influence was estimated by a sensitometric method for the action of visible light and electrons.

Card 1/1

BENES, JAROSLAV

19

✓ Nuclear emulsion for neutron dosimetry. Jaroslav Beneš, Zbyněk Hrkal, Josef Jubal, and Lenka Tomášková. (Czech. Acad. Sci., Prague). *Jaderná energie* 5, 410–12 (1959).—A nuclear emulsion filled with B was found better than one filled with Li. B was added as borax + H_3BO_3 to a B content of 0.326 × 10^{-3} g./sq. cm., with a layer thickness of 75 μ, the B compds. being mixed with the other emulsion ingredients before its prepn., in order to ensure uniformity. The sensitivity of the emulsion and its reproducibility were tested for α-particles from Po^{210}, electrons from C^{14}, and visible light. The neutron calibration was carried out with a Po–Be source in paraffin. The emulsion was tested as a personal dosimeter. H. Neuert

5

CZECH/37-59-2-3/20

AUTHORS: Josef Kubal, Jarcslav Beneš, Zbynek Hrkal

TITLE: On the Sensitivity and Regression of Silver Bromo Iodide Nuclear Emulsions

PERIODICAL: Československý Časopis Pro Fysiku, 1959, Nr 2, pp 133-140 (+ 1 plate)

ABSTRACT: The maximum possible addition of AgI to AgBr at 25 °C is 29 mol%. Large additions of AgI are unwanted for nuclear emulsions because they reduce the sensitivity (Ref 6). The analysis of Ilford G5 and Agfa Kc nuclear emulsions shows (Ref 7) that they contain small amounts of AgI. Besides sensitivity, the stability of the latent image is an important consideration for nuclear emulsions. The exact mechanism of regression is not well understood because many factors influence it. Several explanations have been put forward (Refs 8-13). No previous authors have studied regression as a function of the contents of iodide. The emulsions used for our experiments were prepared by a method described by the authors (Ref 14). The emulsions contained 2.8 mol% of Cd and between 0 and 8 mol% AgI. The sensitivity of the emulsions was tested with visible light, α-particles and electrons. Each

Card 1/4

On the Sensitivity and Regression of Silver Bromo Iodide Nuclear Emulsions

measurement was repeated at least twice (see also Ref 14). The dependence of the sensitivity to visible light on the concentration of AgI is shown in Fig 1. Curve 1 shows the sensitivity of a non-sensitised emulsion, while Curve 2 shows that of a sensitised emulsion. The sensitivity increases with increasing concentration of AgI to 3 mol%, then decreases up to 5½ mol%, and afterwards increases again. From 4 mol%, γ decreases, which shows an increase in grain size from this concentration of AgI upwards. The same conclusion regarding grain size was reached from measurements with α-particles. The sensitivity to electrons is an entirely different function of the concentration of AgI (Fig 2). Up to 3 mol% the sensitivity is constant, it decreases somewhat to 6½ mol% and then again remains constant. For α-particles, the sensitivity increases up to 3 mol% while a further increase is disadvantageous because of the increased grain size. Regression was generally slowed down by the addition of AgI. Emulsions containing 1 or 3 mol% AgI behaved, from the point of view of regression, identically. The regression for visible light is relatively slow.

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On the Sensitivity and Regression of Silver Bromo Iodide Nuclear Emulsions

A regression coefficient of 50 was achieved in an AgBr emulsion after 16 days, in an AgBr and AgI emulsion after 24 days. The regression for visible light was studied at 18 °C for 65 days. Fig 3 shows the regression for an emulsion containing 1 mol% AgI. Sensitised emulsions show more regression of the latent image produced by visible light than non-sensitised emulsions. However, this apparently varies from sensitizer to sensitizer (Refs 10, 17). The regression for electrons is shown in Fig 4a, for a sensitised AgBr emulsion, for two temperatures: 18° and 4 °C. The same dependence for an AgBr + AgI emulsion is shown in Fig 4b. The higher temperature obviously increases the rate of regression. The regression for electrons in sensitised emulsions is slower than in non-sensitised emulsions. The same can be said for α-particles and this is shown in Fig 5.

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Hypersensitisation of nuclear emulsions is known from Refs 19-21. We have tried hypersensitisation by

CZECH/37-59-2-3/20

On the Sensitivity and Regression of Silver Bromo Iodide Nuclear Emulsions

triethanolamin (Refs 19-21) on AgBr + AgI emulsions and achieved a 10.6-fold increase in sensitivity to electrons.

Card 4/4

There are 7 figures, 3 tables and 21 references, of which 8 are Soviet, 9 English, 2 Czech and 2 French.

ASSOCIATION: Ústav jaderné fysiky ČSAV a Fysikálni ústav Karlovy university, Praha
(Department of Physics, Charles University, Prague)

SUBMITTED: September 10, 1958

Z/008/60/054/03/028/029
E073/E335

AUTHOR: Beneš, Jaroslav

TITLE: Recording of Electron Radiation by Photographic Methods

PERIODICAL: Chemicke listy, 1960, Vol 54, Nr 3, pp 302 - 319

ABSTRACT: This is a comprehensive review paper and the subject matter is dealt with under the following chapter headings:

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4/008/60/054/03/023/02
E073/E335

Recording of Electron Radiation by Photographic Methods

The review is based on published information, as specified in the bibliography, which contains reference to papers published up to and including 1958. There are 132 references, 12 of which are Czech, 38 Soviet, 4 French, 6 German, 3 Swiss and 69 English.

Card 2/2

BENES, Jaroslav

Protective dosimetry of corpuscular radiation by a photographic method. Jaderna energie 8 no.1:15-20 Ja '62.

1. Dozimetricke oddeleni Ustavu jaderneho vyzkumu, Ceskoslovenska akademie ved.

Z/038/62/000/004/003/006
D291/D301

AUTHOR: Beneš, Jaroslav

TITLE: Photographic dosimetry of X- and gamma radiation

PERIODICAL: Jaderná energie, no. 4, 1962, 122 - 125

TEXT: The article generally lists the principles of film dosimetry for detecting X- and gamma radiation and evaluates advantages and disadvantages of this method. The application of film badges in protective dosimetry is studied by the Dozimetrické oddělení Ústavu jaderného výzkumu ČSAV(Dosimetry Department of the Nuclear Research Institute Czechoslovak AS) under the direction of Academician F. Běhounek, and lately also by the ÚVVVR. Film badges have certain advantages over other detection instruments and are preferably used in protective dosimetry, since they are rather sensitive (0.1 r and even less), small and inexpensive, and also permit rough discrimination of individual radiation energies. However, they have also certain disadvantages, since the film material has to be prepared, loaded and processed, and continuous de-

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Z/038/62/000/004/003/006
D291/D301

Photographic dosimetry of ...

tection and reading of instantaneous doses becomes thus impossible. For correct evaluation of film badges, used in protective dosimetry, it is recommended that each film emulsion be individually calibrated, and that films be used preferably in cases where X- and gamma sources have a certain, known energy spectrum. There are 5 figures and 9 references: 4 Soviet-bloc and 5 non-Soviet-bloc. The references to the English-language publications read as follows: W.L. McLaughlin - M. Ehrlich: Nucleonics 12 (1954), p. 34; R.B. Wilsey: Radiology 66 (1959), pp 406, 418. (Technical Editor: F. Běhounek).

ASSOCIATION: Dozimetrické oddělení Ústavu jaderného výzkumu ČSAV (Dosimetry Department of the Nuclear Research Institute, Czechoslovak AS)

Card 2/2

SI/WW

ACCESSION NR: AP3003059 Z/0043/63/000/006/0425/0433

AUTHOR: Benes, J.

TITLE: The influence of ferric chloride on the inhibited oxidation of polypropylene

SOURCE: Chemicke zvesti, No. 6, 1963, 425-433

TOPIC TAGS: Polypropylene antioxidant, oxidation mechanism, ferric chloride, induction period, deactivator, thermal oxidation

ABSTRACT: Thermal stability of polypropylene is increased by antioxidants; it is decreased by metal ions, those influence may, however, be limited by deactivators. A laboratory-prepared polypropylene protected by commercial antioxidants was tested for oxidation stability in the presence of ferric chloride, inhibited by commercially available inhibitors. Ferris chloride does not increase the oxidation of the inhibitors, but increases their concentration at the end of the induction period. This is probably caused by a faster rate of decomposition of peroxides, and possibly by a simultaneous catalytic decomposition of polypropylene into alkyl radicals. The damaging effect of ferric chloride on the thermooxidation stability of polypropylene with a phenolic antioxidant is best compensated

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ACCESSION NR: AP3003059

by a reducing agent, or by a deactivator producing a stable complex with the iron; at the same time these agents have also a synergistic effect. Orig. art. has: 3 figures, 21 formulas, 3 tables.

ASSOCIATION: Vyzkumny ustav makromolekularni chemie, Brno (Research Institute for Macromolecular Chemistry)

SUBMITTED: 13 Feb 63 DATE ACQ: 22 Jul 63 ENCL: 00

SUB CODE: CH NO REF SOV: 009 OTHER: 007

Card 2/2

BENES, Jaroslav

Preparation of thorium-234 without carrier. Jaderna energie 9 no.10:324-326 O '63.

1. Radiologicka dozimetrie, Ustav jaderneho vyzkumu, Praha.

BENES, Jaroslav; KYRS, Miroslav

Isolation of Cs^{137} from liquid radioactive fallout. Jaderna energie 9 no.9:295 S'63.

1. Ustav jaderneho vyzkumu, Ceskoslovenska akademie ved, Rez u Prahy.

DYNES, Jaroslav; KOPEC, Josef

Photographic dosimetry of high doses of X and gamma radiation. Jaderna energie 10 no.1:20 Ja'64.

1. Ustav jaderneho vyzkumu, Ceskoslovenska akademie ved, Rez.

BENES, Jaroslav; MATOUSKOVA, Jirina

Problem of evaluation of excessively irradiated film dosimeters. Jaderna energie 10 no.11:403-405 N '64.

1. Department of Radiological Dosimetry of the Institute of Nuclear Research of the Czechoslovak Academy of Sciences, Rez near Prague.

BENES, J.

CZECHOSLOVAKIA

BENES, J; VOBECKY, M

Institute of Nuclear Research, Czechoslovak Academy of Sciences, Rez near Prague - (for both)

Prague, Collection of Czechoslovak Chemical Communications, No 11, November 1966, pp 4398-4404

"Precipitation and coprecipitation in the presence of EDTA. Part 1: Effect of the conditions on the precipitation of radioactive barium and stronium by the sulfate method."

BENES, Jaroslav, inz., CSc.

Experimental sections of forest road reinforcement by concrete belts. Les cas 9 no.2:127-144 F '63.

1. Lesnicka fakulta, Vysoka skola zemedelska, Brno.

BENES, Jaroslav

International transportation of goods. Zel dop tech 12 no.11:285-287 '64.

PHASE I BOOK EXPLOITATION CZECH/5651

Beneš, Jiří, Engineer, Doctor.

Statistická dynamika regulačních obvodů (Statistical Dynamics of Regulating Circuits) Prague, SNTL, 1961. 334 p. (Series: Teoretická knižnice inženýra) 3,400 copies printed.

Reviewers: Milan Balda, Docent, Engineer, Candidate of Sciences, Václav Dupač, Candidate of Sciences, and Zdeněk Kotek, Docent, Engineer, Candidate of Sciences; Resp. Ed.: Zdeněk Tichý, Engineer; Tech. Ed.: Marie Králová; Managing Ed. for Literature on Theoretics, Chief Ed.: Vlastimil Chihák, Engineer.

PURPOSE : This book is intended for electrical engineers, students in electrical engineering divisions of schools of higher education, and workers in research institutes.

COVERAGE: The book is concerned with the application of purportedly new, progressive methods of statistical dynamics to the solution of various problems of automatic control. The following topics

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are discussed: the meaning, application, and basic concepts of statistical dynamics; methods of measurement in regulating circuits; measuring instruments; optimal design of regulating circuits according to statistical methods; and the use of statistical methods in radar, metallurgy, power systems, geologic survey, electrical measuring techniques, and servomechanisms. The book is based on material gathered by the Division of Electrical Engineering in the Technical School of Higher Education in Prague, particularly from the following courses: "Theory of Servomechanisms" (1955) and "Statistical Compensation" (1957-59), in the Department of High-Frequency Engineering, and "Statistical Dynamics" (1959-60), in the Department of Technical Measurements and Automation. The author thanks Václav Dupáč, Candidate of Sciences, of the Department of Physics and Mathematics of Charles University, and A. Ktimkov of the Institute of Information Theory, Czechoslovak Academy of Sciences, for their help. There are 99 references: 51 Soviet, 34 English, 7 Czech, 6 French, and 1 German.

16. 2220

S/044/62/000/008/065/073
C111/C333

AUTHOR: Beneš, Jiří

TITLE: A numerical method for the calculation of the transition of an instationary process by a non-linear automatic servo-system

PERIODICAL: Referativnyy zhurnal, Matematika, no. 8, 1962, 53, abstract 8V278. ("Souhrn praci o automat. 1959", Praha, 1961, 125-147)

/B

TEXT: In several places of a servo-circuit with typically non-linear members one shall find out the dispersion and the average of a stochastic process. One supposes that the characteristic quantities of system and the stochastic input-effect change slowly. In the calculation one chooses the segments of the realization of the input-effect periodic and expanded in terms of Laguerre functions. The series coefficients c_ν are calculated by aid of a specially developed "orthogonal analyzator" with electro mechanical modulation of the Laguerre functions. In order to obtain the approximative spectral density of the input process $S_{nn}(j\omega)$, one transforms the sum

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$\sum_{i=0}^{5} c_\nu L_\nu$ by the Fourier transformation.

The dispersion of the servo-quantity is expressed by the Parceval-integral:

$$\overline{\varphi}^2 = \int_{-\infty}^{\infty} S_{nn}(j\omega) \cdot | G_{n\varphi}(j\omega) | d\omega ,$$

where $G_{n\varphi}(j\omega)$ is the frequence curve of the linearized servo-system. For the calculation of the integral one uses the algorithm, newly developed by J. Nekolny. The non-linearities are statistically linearized. For the solution of the problem altogether one develops an iteration method. Calculation formulas, block-diagrams of the calculation algorithm and calculation examples are given which were carried out on the digital computer "Strela" and "Ural".

[Abstracter's note: Complete translation.]

Card 2/2

BENES, Jiri, ing., dr.

Action plan for development of the innovator movement. Stroj vyr 11 no.8:377-378 Ag '63.

1. Vedecky tajemnik sekce strojnictvi, Ceskoslovenska veddecko-technicka spolecnost.

BENES, Jiri

Innovators' discussion. Pod org 17 no.4:145-147 Ap '63.

BENES, Jiri, ing., CSc.

Effect of ferric chloride on inhibited polypropylene oxidation.
Chem zvesti 17 no.6:425-433 '63.

1. Vyzkumny ustav makromolekularni chemie, Brno, Tkalcovska 2.

BENES, Jiri, inz. dr

Ways for raising the quality and effectiveness of improvement suggestions. Podn org 18 no.5:223-226 My '64.

1. Research Institute of the Machine Industry Technology and Organization.

BENES, Jiri, inz. CSc. (Brno, Namesti Svobody 12); SMOLKA, Karel, inz, (Brno 12, Dobrovskehc 27)

Acid catalysis of bis(2-chloroethyl) sulfide ionization. Chem zvesti 18 no.4:259-265 '64

1. Antonin Zapotocky Military Academy, Brno.

BENES, Jiri, inz., C.Sc. (Brno 2, Namesti Svobody 12)

Role of water in the substitution reactions of bis(2-chlor-ethyl) sulfide. Chem zvesti 18 no.11:852-863 '64.

1. Chair of Organic Chemistry, Higher School of Chemical Technology, Pardubice.

BENES, Jiri; KOVAR, Milan; MIKULASEK, Jiri

Recording adapter to the ATIT automatic titration apparatus.
Chem listy 58 no. 7 819-822 Jl '64.

1. Antonin Zapotocky Military Academy, Brno.

BENES, Josef, ing.

Influence of the metallurgic industry development on the education of operational technicians in secondary industrial schools. Hut listy 18 no.7:525-526 Jl '63.

1. Vyzkumny ustav odborneho skolstvi, Praha.

[redacted], Josef, ing.

June, the month of pure water. Vodní hosp la r.[illegible]
'64.

1. Ministry of Agriculture, Forestry and Water [illegible]
Management.

BREJCHA, Miloslav; BERGSTEINOVA, Vlasta; BENES, Josef

Effect of certain antibiotics on post-irradiation syndromes in mice and rats. Cesk. onkol. 3 no.4:324-332 1956.

1. Staatliches Fakultatskrannhenhaus, Praha.
(RADIATIONS, effects,
in mice & rats, eff. of antibiotics on reactivity (Ger))
(ANTIBIOTICS, effects,
on radiation eff. in mice & rats (Ger))

BENES, Josef; SAFRATA, Stanislav

New results of the research on barium titanate. Pokroky fys pev lat 3: 7-43 '56.

1. Katedra atomistiky a fysiky pevnych latek, Karlova universita, Praha (for Benes) 2. Fysikalni ustav, Ceskoslovenska akademie ved, Praha (for Safrata).